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UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : PATENT  
Norbert WEBER :  
Serial No.: 10/588,821 : Art Unit:  
Filed: August 9, 2006 : Examiner:  
For: **HYDRAULIC ACCUMULATOR** :

**SUBMISSION OF ENGLISH LANGUAGE  
PRELIMINARY EXAMINATION REPORT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith is an English language Preliminary Examination Report for the above-identified application.

Respectfully submitted,

Mark S. Bicks  
Reg. No. 28,770

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1300 19th Street, NW, Suite 600  
Washington, DC 20036  
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Dated: May 8, 2007

From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

To:

BARTELS UND  
Lange Str. 51  
70174 Stuttgart  
ALLEMAGNE

Bartels und Partner  
Patentanwälte  
Eingegangen:  
PARTNER 15. NOV. 2006  
Received:

TERMIN .....

Date of mailing (day/month/year) 09 November 2006 (09.11.2006)	
Applicant's or agent's file reference 40cdh/229329/PCT	IMPORTANT NOTIFICATION
International application No. PCT/EP2005/002458	International filing date (day/month/year) 09 March 2005 (09.03.2005)
Applicant HYDAC TECHNOLOGY GMBH et al	

## 1. Transmittal of the translation to the applicant.



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

## 2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

## 3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO  
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Authorized officer

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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 40cdh/229329/PCT	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/EP2005/002458	International filing date ( <i>day/month/year</i> ) 09 March 2005 (09.03.2005)	Priority date ( <i>day/month/year</i> ) 16 April 2004 (16.04.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant HYDAC TECHNOLOGY GMBH			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input checked="" type="checkbox"/> | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

Date of issuance of this report  
01 November 2006 (01.11.2006)

Authorized officer

**Agnes Wittmann-Regis**

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Form PCT/IB/373 (January 2004)

# PATENT COOPERATION TREATY

TRANSLATION

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing **See Form PCT/ISA/210**  
(day/month/year) **(sheet 2)**

Applicant's or agent's file reference <b>40cdh/229329/PCT</b>		<b>FOR FURTHER ACTION</b> See paragraph 2 below	
International application No. <b>PCT/EP2005/002458</b>	International filing date (day/month/year) <b>09.03.2005</b>	Priority date (day/month/year) <b>16.04.2004</b>	
International Patent Classification (IPC) or both national classification and IPC <b>F15B1/24</b>			
Applicant <b>HYDAC TECHNOLOGY GMBH</b>			

**1. This opinion contains indications relating to the following items:**

- |                                     |              |  |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the opinion   |
| <input type="checkbox"/>            | Box No. II   | Priority   |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |
| <input checked="" type="checkbox"/> | Box No. IV   | Lack of unity of invention   |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited  |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application   |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application  |

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA/EP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/002458

Box No. I      Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language  
\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/002458

Box No. IV

Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:

☒ paid additional fees

☐ paid additional fees under protest

☐ not paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

☐ complied with

☒ not complied with for the following reasons:

1. The first invention (claims 1, 3-11) relates to a hydraulic accumulator having a lid-like closure part.

2. The second invention (claims 2, 12-13) relates to a hydraulic accumulator having an end part formed in one piece.

3. The two inventions certainly solve the same problem, namely to produce a lightweight hydraulic accumulator without the need for a lot of material. However, this problem is generally known and therefore cannot be regarded as a "special technical feature" within the meaning of PCT Rule 13.2.

4. Consequently, this opinion has been established in respect of the following parts of the international application:

☒ all parts

☐ the parts relating to claims Nos. \_\_\_\_\_

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/002458

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	3-11	YES
	Claims	1, 2, 12, 13	NO
Inventive step (IS)	Claims	3-11	YES
	Claims	1, 2, 12, 13	NO
Industrial applicability (IA)	Claims	1, 3-11	YES
	Claims		NO

2. Citations and explanations:

Reference is made to the following documents:

D1: DE 101 61 797 C1 (HYDAC TECHNOLOGY GMBH) 31 July 2003  
(2003-07-31)

D2: DE 71 13 311 U (MASCHINENFABRIK HAUSHERR R & SOEHNE GMBH)  
28 November 1974 (1974-11-28)

D5: GB-A-1 531 612 (GREER HYDRAULICS INC) 8 November 1978  
(1978-11-08)

D6: US-A-5 365 736 (YAMAMOTO ET AL.) 22 November 1994 (1994-  
11-22)

D7: US-A-4 351 363 (HAUG ET AL.) 28 September 1982 (1982-09-  
28)

4. D1 shows all the features of claim 1, namely:  
a hydraulic accumulator having an accumulator housing 29 in  
the form of a tube, in which a separating element 21 movable  
in the axial direction of the latter separates pressure spaces  
from one another which adjoin said separating element 21 on  
both sides, and in which the tube is closed off at least at  
one end by a lid-like closure part 23 which has a bearing  
surface for connecting to the relevant end edge of the tube,  
the bearing surface having a surface part in the form of an  
annular surface 37, which projects axially into the interior

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/002458

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

of the tube and is intended for the positive-locking support of the tube wall against radial forces, and also an annular surface which extends in the radial direction and is intended for the positive-locking support of the tube wall against axial forces (see figure 2 and the associated paragraphs 19 and 21).

5. D2 is likewise prejudicial to the novelty of claim 1 (see in particular the tubular accumulator housing 1 and the lid 2 or 4, which has two annular surfaces for supporting the tube wall against axial or radial forces, respectively).

6. D5 shows all the features of claim 2, namely:  
a hydraulic accumulator (see figures 1 and 4) having an accumulator housing in the form of a tube 11, 11', in which a separating element 13 movable along the longitudinal axis of the latter separates pressure spaces from one another which adjoin said separating element 13 on both sides, and in which the tube is closed off at one end by an end part formed in one piece from the wall of the tube by hot forming (see page 2, line 98), a region which is adjacent to and concentric to the longitudinal axis being formed on the end part, this region being intended for forming a curved dome 22, 22' forming a prominence of the end part.

7. Claim 2 cannot be regarded as inventive over D6 (see figure 1) or D7 (see figure 4). Both documents disclose an end part formed in one piece from the wall of a tube and having a dome. The production of the end part is not described in the two documents. However, production by hot forming will be regarded merely as a conventional measure.



WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/002458

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

8. The subject matter of claims 3-11 is neither known from nor suggested by the prior art.

9. The features introduced by claim 12 are obviously known from D5, D6 and D7.

10. The features introduced by claim 13 are known from D5 (see figure 3).